

APPENDIX D

Noise & Vibration Data

Roadway Construction Noise Model (RCNM), Version 1.1

Report date: 5/22/2025
 Case Description: Star Mazda (Demo)

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Dignity Health Memorial Hospital	Commercial	60	60	60

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	124	0
Concrete Saw	No	20		89.6	124	0

Results

Equipment	Calculated (dBA)	
	*Lmax	Leq
Dozer	73.8	69.8
Concrete Saw	81.7	74.7
Total	81.7	75.9

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Royal Villa Nursing Home	Commercial	60	60	60

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	234	0
Concrete Saw	No	20		89.6	234	0

Results

Equipment	Calculated (dBA)	
	*Lmax	Leq

Dozer	68.3	64.3
Concrete Saw	76.2	69.2
Total	76.2	70.4

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Residences & Armenian Ecclesiastical Church to the northwest	Residential	60	60	60

Description	Impact Device	Usage(%)	Equipment			
			Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	546	0
Concrete Saw	No	20		89.6	546	0

Results

Equipment	Calculated (dBA)	
	*Lmax	Leq
Dozer	60.9	56.9
Concrete Saw	68.8	61.8
Total	68.8	63

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM), Version 1.1

Report date 5/22/2025

Case Desc: Star Mazda (Grading/Site Prep)

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Dignity Hea	Commercial	60	60	60

		Equipment					
Description	Impact	Device	Usage(%)	Spec	Actual	Receptor	Estimated
				Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Grader	No		40	85		124	0
Dozer	No		40		81.7	124	0

Results

		Calculated (dBA)	
Equipment		*Lmax	Leq
Grader		77.1	73.1
Dozer		73.8	69.8
Total		77.1	74.8

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Royal Villa I	Commercial	60	60	60

		Equipment					
Description	Impact	Device	Usage(%)	Spec	Actual	Receptor	Estimated
				Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Grader	No		40	85		234	0
Dozer	No		40		81.7	234	0

Results

		Calculated (dBA)	
Equipment		*Lmax	Leq
Grader		71.6	67.6
Dozer		68.3	64.3

Total 71.6 69.3

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Descriptor Land Use	Daytime	Evening	Night
Residences Residential	60	60	60

Equipment

Description	Impact Device	Usage(%)	Spec	Actual	Receptor	Estimated
			Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Grader	No	40	85		546	0
Dozer	No	40		81.7	546	0

Results

Calculated (dBA)

Equipment	*Lmax	Leq
Grader	64.2	60.3
Dozer	60.9	56.9
Total	64.2	61.9

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 5/22/2025

Case Description: Star Mazda (Construction)

---- Receptor #1 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Dignity Health Memorial Hospital	Commercial	60	60	60

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Crane	No	16		80.6	124	0
Tractor	No	40	84		124	0

Results

Equipment		Calculated (dBA)	
		*Lmax	Leq
Crane		72.7	64.7
Tractor		76.1	72.1
	Total	76.1	72.9

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA)		
		Daytime	Evening	Night
Royal Villa Nursing Home	Commercial	60	60	60

Description	Impact Device	Usage(%)	Equipment		Receptor Distance (feet)	Estimated Shielding (dBA)
			Spec Lmax (dBA)	Actual Lmax (dBA)		
Crane	No	16		80.6	234	0
Tractor	No	40	84		234	0

Results

Calculated (dBA)

Equipment		*Lmax	Leq
Crane		67.1	59.2
Tractor		70.6	66.6
	Total	70.6	67.3

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences & Armenian Ecclesiastical Church to the northwest	Residential	60	60	60

		Equipment				
		Spec	Actual	Receptor	Estimated	
Description	Impact	Lmax	Lmax	Distance	Shielding	
	Device	(dBA)	(dBA)	(feet)	(dBA)	
Crane	No	16		80.6	546	0
Tractor	No	40	84		546	0

Results

Calculated (dBA)

Equipment		*Lmax	Leq
Crane		59.8	51.8
Tractor		63.2	59.3
	Total	63.2	60

*Calculated Lmax is the Loudest value.

Star Mazda		
Ref=	Reference vibration level (PPV)	Dignity Health Memorial Hospital
RefD=	Reference distance for Reference vibration level (Feet)	
Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	34	Distance from equipment to sensitive receptor
Equip=	0.056	
Annoyance VdB		
Ref=	87	Based on type of equipment
RefD=	25	
D=	34	Distance from equipment to sensitive receptor
Equip=	83	
Peak demolition vibration based on utilizing a large bulldozer.		
Source: FTA Tranist Noise and Vibration Impact Assessment, 2018		

Star Mazda	Royal Villa Nursing Home
Ref=	Reference vibration level (PPV)
RefD=	Reference distance for Reference vibration level (Feet)
Vibration PPV	
Ref=	0.089 Based on type of equipment
RefD=	25
D=	144 Distance from equipment to sensitive receptor
Equip=	0.006
Annoyance VdB	
Ref=	87 Based on type of equipment
RefD=	25
D=	144 Distance from equipment to sensitive receptor
Equip=	64
Peak demolition vibration based on utilizing a large bulldozer.	
Source: FTA Tranist Noise and Vibration Impact Assessment, 2018	

Star Mazda		Residences & Armenian Ecclesiastical Church to the northwest
Ref=	Reference vibration level (PPV)	
RefD=	Reference distance for Reference vibration level (Feet)	
Vibration PPV		
Ref=	0.089	Based on type of equipment
RefD=	25	
D=	391	Distance from equipment to sensitive receptor
Equip=	0.001	
Annoyance VdB		
Ref=	87	Based on type of equipment
RefD=	25	
D=	391	Distance from equipment to sensitive receptor
Equip=	51	
Peak demolition vibration based on utilizing a large bulldozer.		
Source: FTA Tranist Noise and Vibration Impact Assessment, 2018		

NOISE IMPACT ANALYSIS
STAR MAZDA EXPANSION PROJECT
CITY OF GLENDALE, CALIFORNIA

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Date:

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Project No.: P21-044 N

PROJECT DESCRIPTION

NOISE SETTING

Sound is mechanical energy transmitted by pressure waves in a compressible medium such as air. Noise is generally considered to be unwanted sound. Sound is characterized by various parameters that describe the rate of oscillation of sound waves, the distance between successive troughs or crests, the speed of propagation, and the pressure level or energy content of a given sound. In particular, the sound pressure level has become the most common descriptor used to characterize the loudness of an ambient sound level.

The decibel (dBA) scale is used to quantify sound pressure levels. Although decibels are most commonly associated with sound, "dB" is a generic descriptor that is equal to ten times the logarithmic ratio of any physical parameter versus some reference quantity. For sound, the reference level is the faintest sound detectable by a young person with good auditory acuity.

Since the human ear is not equally sensitive to all sound frequencies within the entire auditory spectrum, human response is factored into sound descriptions by weighting sounds within the range of maximum human sensitivity more heavily in a process called "A-weighting," written as dB(A). Any further reference in this discussion to decibels written as "dBA" should be understood to be A-weighted.

Time variations in noise exposure are typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called LEQ), or alternately, as a statistical description of the sound pressure level that is exceeded over some fraction of a given observation period. Finally, because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law requires that, for planning purposes, an artificial dB increment be added to quiet time noise levels in a 24-hour noise descriptor called the Ldn (day-night) or the Community Noise Equivalent Level (CNEL). The CNEL metric has gradually replaced the Ldn factor, but the two descriptors are essentially identical.

For "stationary" noise sources, or noise sources emanating from private property, such as a parking structure, the City does have legal authority to establish noise performance standards designed to not adversely impact adjoining uses. These standards are typically articulated in the jurisdictional Municipal Code. These standards recognize the varying noise sensitivity of both transmitting and receiving land uses. The property line noise performance standards are normally structured according to land use and time-of-day.

NOISE STANDARDS

For noise generated on one property affecting an adjacent use, the City of Glendale limits the amount of noise crossing the boundary between the two uses. Only commercial uses abut the Project site. The closest sensitive use to the east, the Victor Royal Adult Living Center is approximately 350 feet from the nearest project perimeter, and is located on Laurel Avenue Between Brand and Glendale. The Glendale

Memorial Hospital and Health Center is west of the site with more than a 300-foot separation distance to the existing showroom which is to be demolished.

The central business district and commercial areas in Glendale have a presumed ambient noise level which applies to all properties within the designated zone. Commercial uses should not exceed a noise level of 65 dBA at any time at the boundary with another use. Star Mazda is not contiguous with a residential district. There are no noise sensitive uses adjacent to Star Mazda.

Where the actual ambient is equal to or more than the presumed ambient, the actual ambient shall control and any noise may not exceed the actual ambient by more than five dbA; however, in no event may the actual ambient exceed the presumed noise standards by five dbA.

CONSTRUCTION NOISE

Construction noise is exempt from noise standards but subject to conditions iterated under section 8.36.080 of the Municipal Code. The Code states that construction is only permitted between the hours of 7 a.m. to 7 p.m. Monday through Saturday with no construction permitted on Sundays and Federal holidays. However, the General Plan Noise Element proposes a change to restrict the hours of construction on Saturday to 9 a.m. to 5 p.m. with other days remaining unchanged.

BASELINE NOISE LEVELS

Short term on-site noise measurements were made to document baseline levels in the Project area. Noise measurements were conducted on Wednesday, January 5, 2022, at approximately 1:15-1:45 p.m., at the two locations shown in Figure 2.

Table 1
Measured Noise Levels (dBA)

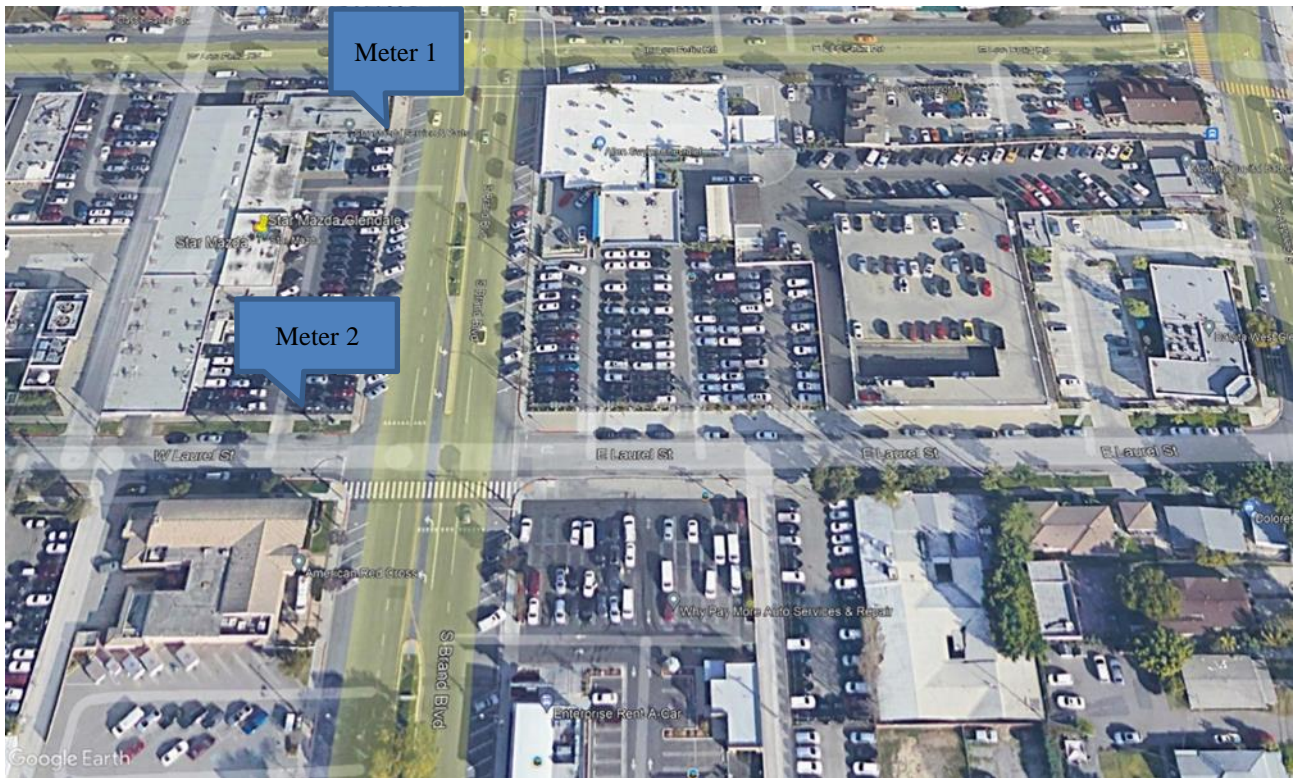
Site No.	Location	Leq	Lmax	Lmin
1	Existing Showroom	63	81	49
2	Proposed Showroom	59	80	48

The only unique noise source at the existing showroom was a loudspeaker used to page sales personnel out on the lot typically asking them to come to the office. The maximum noise level from the pager was less than maxima from ambient sources, primarily attributed to traffic on Brand Boulevard. There is a hospital to the west with frequent sirens, but not near the dealership. The maximum observed noise at the existing showroom locale was a very loud motorcycle with a bad muffler, the loudest noise at the southern site boundary where the new showroom is proposed was a fire engine siren northbound Brand Boulevard.

The hospital to the west, the Glendale Memorial Hospital and Health Center, is more than 300 feet from the existing showroom and there are numerous intervening structures. The new showroom location will have a greater separation distance.

The Victor Royal Adult Living Center is on Laurel Avenue east of the site across Brand Boulevard and is more than 350 feet from the closest perimeter of the relocated showroom. Traffic from Brand Avenue dominates the noise environment and was observed to mute the existing showrooms loudspeaker at 50 feet. The new showroom is more than 350 feet away and loudspeaker noise would not be audible. The Allen Gwynn Chevrolet facility is directly across the street from the living center. In addition, any loudspeakers for the new location would be directed towards the center of the Star Mazda facility and not towards any sensitive use.

Figure 1
Noise Meter Locations



NOISE IMPACTS

IMPACT SIGNIFICANCE CRITERIA

Noise impacts are considered significant if they result in:

- a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.
- b. Generation of excessive groundborne vibration or groundborne noise levels.
- c. For a Project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels.

Several characteristic noise sources are typically identified with land use intensification such as that proposed for the development of the proposed Project. Construction activities, especially heavy equipment, will create short-term noise increases near the site. Such impacts would be important for possible noise-sensitive receptors. Additionally, the Project analysis examines operational noise on adjacent receptors. There are no airports within proximity to the Project.

The term "substantial increase" is not defined by any responsible agency. The limits of perceptibility by ambient grade instrumentation (sound meters) or by humans in a laboratory environment is around 1.5 dB. Under ambient conditions, people generally do not perceive that noise has clearly changed until there is a 3 dB difference. A threshold of 3 dB is commonly used to define "substantial increase." An increase of +3 dBA CNEL in traffic noise would be consistent a significant impact.

CONSTRUCTION NOISE IMPACTS

The Glendale Memorial Hospital will be the closest sensitive use to the demolition of the existing showroom while the Victor Royal Adult Living Center will be the closest sensitive use to the new showroom.

The noise ordinance exempts construction activities from compliance with the noise ordinance limits as long as activity occurs within permitted hours. The City of Glendale currently limits construction activities to between the hours of 7 a.m. to 7 p.m. Monday through Saturday with no construction permitted on Sundays and Federal holidays. As stated earlier an effort is underway to restrict hours of construction on Saturday to 9 a.m. to 5 p.m. with other days remaining unchanged.

The City of Glendale does not include a significance threshold to assess construction noise impacts. Therefore, a noise threshold utilizing the OSHA agency limits of noise exposure was used for analysis of construction significance. The OSHA standard limits noise exposure of workers to 90 dBA or less over eight continuous hours, or 105 dBA or less over one continuous hour. For the purpose of

analyzing potential noise significance the OSHA established noise thresholds were adopted for use. For this analysis, a noise impact is considered potentially significant if Project construction activities extended beyond ordinance time limits for construction or construction-related noise levels exceed the OSHA standards unless technically infeasible to do so.

The exact construction schedule for the proposed development is not known at this time. Construction activities proposed for similar projects typically include demolition and clearing, grading and improvements, construction of the building shells, interior finishing, and landscaping. Construction equipment such as bulldozers, backhoes, loaders, and assorted other hand tools and professional grade equipment would likely be used.

In 2006, the Federal Highway Administration (FHWA) published the Roadway Construction Noise Model that includes a national database of construction equipment reference noise emissions levels. The database provides an acoustical usage factor to estimate the fraction of time each piece of construction equipment is operating at full power during a construction phase. The usage factor is a key input variable that is used to calculate the average Leq noise levels.

Table 2 shows a probable construction fleet and provides the associated noise levels at a reference distance of 50 feet. The table identifies highest (L_{max}) noise levels associated with each type of equipment, then adjusts this noise level for the extent of equipment usage (usage factor), which is represented as Leq. The table is organized by construction activity and equipment associated with each activity

Quantitatively, the primary noise prediction equation is expressed as follows for the hourly average noise level (Leq) at distance D between the source and receiver (dBA):

$$Leq = L_{max} @ 50' - 20 \log (D/50') + 10 \log (U.F\%/100) - I.L.(bar)$$

Where:

L_{max} @ 50' is the published reference noise level at 50 feet

U.F.% is the usage factor for full power operation per hour

I.L.(bar) is the insertion loss for intervening barriers

**Table 2
Construction Equipment Noise Levels at 50-ft Reference Distance**

Phase Name	Equipment	Usage Factor¹	Measured Noise @ 50 feet (dB)	Cumulative Noise Level @ 50 feet (dB)
Demolition	Dozer	40%	82	78
	Loader/Backhoe	37%	78	74
Grading	Grader	40%	85	81
	Dozer	40%	82	78

	Loader/Backhoe	37%	78	74
Building Construction	Forklift	20%	75	68
	Loader/Backhoe	37%	78	74
	Crane	16%	81	73
	Welder	46%	74	71
Paving	Paver	50%	77	74
	Paving Equip	40%	76	72
	Roller	38%	80	76
	Loader/Backhoe	37%	78	74

Source: FHWA's Roadway Construction Noise Model, 2006

1. Estimates the fraction of time each piece of equipment is operating at full power during a construction operation

Typical hourly average construction generated noise levels are about 68 dBA to 78 dBA Leq measured at a distance of 50 feet from the source. Construction generated noise levels drop off or increase at a rate of about 6 dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often results in lower construction noise levels at distant receptors. The potential for construction-related noise to adversely affect nearby receptors would depend on the location and proximity of construction activities to these receptors.

Table 3 adjusts the expected maximal construction noise level from a reference distance of 50 feet to the actual distance separation unique to the two selected receptors. The hospital will be 300 feet from demolition of the existing showroom but almost 400 feet from construction of the new showroom. The adult living center would be 350 feet from construction of the new showroom, but 450 feet from demolition of the existing showroom.

Only the interior noise levels would be of concern for both adjacent uses. Because the hospital is built more robustly than the adult living facility there was an assumed -30 dBA exterior to interior attenuation factor. Since the adult living facility is an older structure only a -25 dBA exterior to interior noise attenuation factor was assumed.

Table 3
Construction Noise Exposure at Adjoining Receptors
(dBA Leq)

Phase Name	Equipment	Exterior Noise Level		Interior Noise Level	
		Hospital	Adult Living Facility	Hospital	Adult Living Facility
Demolition	Dozer	62	59	32	34
	Loader/Backhoe	58	55	28	30
Grading	Grader	63	64	33	39

	Dozer	60	61	30	36
	Loader/Backhoe	56	57	26	32
Building Construction	Forklift	50	51	20	26
	Loader/Backhoe	56	57	26	32
	Crane	55	56	25	31
	Welder	53	54	23	29
Paving	Paver	56	57	26	32
	Paving Equip	54	55	24	30
	Roller	58	59	28	34
	Loader/Backhoe	56	57	26	32

Shielding by buildings or terrain would result in lower construction noise levels at the above distant receptors. As shown in Table 3, construction noise levels will not exceed 90 dBA, the OSHA threshold adopted for use for this project. In addition, the interior noise levels which are of greater concern would be quite low. Therefore, the following measures are recommended to ensure noise compliance during construction activities:

- Construction is only permitted between the hours of 7 a.m. to 7 p.m. Monday through Saturday with no construction permitted on Sundays and Federal holidays
- Construction vehicles and equipment (fixed or mobile) shall be equipped with properly operating and maintained mufflers.
- Material stockpiles and/or vehicle staging areas shall be located as far as practical from dwelling units.

With inclusion of these measures, construction noise impacts from the Project would be reduced to a less than significant level.

CONSTRUCTION ACTIVITY VIBRATION

Construction activities generate ground-borne vibration when heavy equipment travels over unpaved surfaces or when it is engaged in soil movement. The effects of ground-borne vibration include discernible movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls, and rumbling sounds. Vibration related problems generally occur due to resonances in the structural components of a building because structures amplify groundborne vibration. Within the “soft” sedimentary surfaces of much of Southern California, ground vibration is quickly damped out. Groundborne vibration is almost never annoying to people who are outdoors (FTA 2006).

Groundborne vibrations from construction activities rarely reach levels that can damage structures. Because vibration is typically not an issue, very few jurisdictions have adopted vibration significance thresholds. Vibration thresholds have been adopted for major public works construction Projects, but these relate mostly to structural protection (cracking foundations or stucco) rather than to human annoyance.

A vibration descriptor commonly used to determine structural damage is the peak particle velocity (ppv) which is defined as the maximum instantaneous positive or negative peak of the vibration signal, usually measured in in/sec. The range of such vibration is as follows in Table 4:

**Table 4
Human Response To Transient Vibration**

Average Human Response	ppv (in/sec)
Severe	2.00
Strongly perceptible	0.90
Distinctly perceptible	0.24
Barely perceptible	0.03

Source: Caltrans Transportation and Construction Vibration Guidance Manual, 2013.

Over the years, numerous vibration criteria and standards have been suggested by researchers, organizations, and governmental agencies. As shown in Table 5, according to Caltrans and the FTA, the threshold for structural vibration damage for modern structures is 0.5 in/sec for intermittent sources, which include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment. Older, typically historical residential structures have a 0.3 in/sec threshold. Below this level there is virtually no risk of building damage.

**Table 5
FTA and Caltrans Guideline Vibration Damage Potential Threshold Criteria**

Building Type	PPV (in/sec)
FTA Criteria	
Reinforced concrete, steel or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12
Caltrans Criteria	
Modern industrial/commercial buildings	0.5
New residential structures	0.5
Older residential structures	0.3
Historic old buildings	0.25
Fragile Buildings	0.1
Extremely fragile ruins, ancient monuments	0.08

The predicted vibration levels generated by construction equipment anticipated for use are shown below in Table 6.

Table 6
Estimated Vibration Levels During Project Construction

Equipment	PPV at 10 ft (in/sec)	PPV at 15 ft (in/sec)	PPV at 25 ft (in/sec)	PPV at 40 ft (in/sec)	PPV at 50 ft (in/sec)
Large	0.352	0.191	0.089	0.044	0.031
Loaded trucks	0.300	0.163	0.076	0.037	0.027
Jackhammer	0.138	0.075	0.035	0.017	0.012
Small Bulldozer	0.012	0.006	0.003	0.001	<0.001

Source: FHWA Transit Noise and Vibration Impact Assessment

The calculation to determine PPV at a given distance is:

$$PPV_{distance} = PPV_{ref} * (25/D)^{1.5}$$

Where:

PPV_{distance} = the peak particle velocity in inches/second of the equipment adjusted for distance,

PPV_{ref} = the reference vibration level in inches/second at 25 feet, and

D = the distance from the equipment to the receiver.

As shown, even at 10 feet, vibration levels from a large bulldozer are reduced to a level at which structural damage would not occur. There will not be a large bulldozer within 10-feet of any off-site structure. Most other construction equipment has a much lower vibration signature.

SITE OPERATIONAL NOISE

The only noise associated with the project is the additional vehicular trips attributed to the new showroom and noise from the loudspeakers.

The new showroom will be on the SE corner of the lot. Any speakers will be directed interior to the site, i.e. to the NW and away from the senior living center. In addition, the structure itself will assist in blocking noise at the senior living center which is 350 away. Loudspeaker noise will not be audible at the senior living center. Traffic from Brand Boulevard would dilute any project nuisance.

The Project will generate a net increase of 5 AM peak hour trips, 6 PM peak hour trips, and 65 daily trips. This increase is diluted by the existing traffic on Brand Boulevard and Laurel Street and any vehicular noise attributed to 65 additional daily trips would not be perceptible. By way of reference, it takes a doubling of traffic to create even a +3 dBA increase.

CONCLUSION

Construction noise will be less than significant with the inclusion of the following measures:

- Construction is only permitted between the hours of 7 a.m. to 7 p.m. Monday through Saturday with no construction permitted on Sundays and Federal holidays
- Construction vehicles and equipment (fixed or mobile) shall be equipped with properly operating and maintained mufflers.
- Material stockpiles and/or vehicle staging areas shall be located as far as practical from dwelling units.

Construction vibration levels will be less-than-significant.

Project operational noise attributed to the loudspeaker/PA system will not be audible at any offsite potentially sensitive use.

Project operational noise attributed to the additional project generated 65 vehicular trips will not be audible when overlaid with existing traffic on Brand Boulevard.